



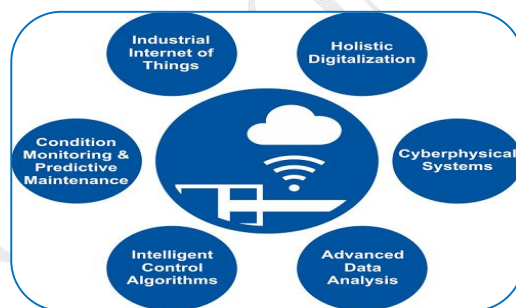
CAST, SOCIAL WELFARE SCHEMES AND DIGITALISATION PROCESS: A CRITICAL ANALYSIS OF REENGINEERING OF SOCIAL WELFARE SCHEMES THROUGH DIGITAL INDIA

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ABSTRACT :

Over 500 million Indians are estimated to be using internet by 2020 with fast paced growth in computer literacy. Also the, greater use of data on mobiles is predicted to help India's internet economy to grow to about \$200 billion or 5 per cent of the GDP by 2020¹. India currently is on the cusp of an internet revolution akin to that of the telecommunication revolution of the 90s.



KEYWORDS : computer literacy , telecommunication , India's internet economy.

INTRODUCTION:

As a matter of fact, due to the revolution in wireless telecommunication over the last couple of decades, people of every strata of the Indian economy have now embraced technology in their personal lives making it easier to reach them. It is now the responsibility of the government to leverage this technology to reach the citizens of the country and provide them with safe, transparent and accountable governance systems. This in turn will effectively address long term goals of eradication of poverty, provision of better health care system, establishment of faster modes of communication, increase in livelihood opportunities for every citizen irrespective of their place of origin, enhancement of standard of living and fuelling economic growth while creating a level playing field for every Indian.

The present government's zeal and enthusiasm in digitalising India by promoting efficient use of internet and latest technology for participatory governance to enable corruption free deliverance of services to the most economically challenged sections of the economy is a creative endeavour.

DIGITALISATION AND SOCIAL WELFARE

There is a difference between the nature of information processes in the early days of information and technology and the present day usage of technology. Initially, it was 'data processing' and 'numerical crunching' through data entry and various other output devices. Today, the application of information technology is a complex process aimed at creating, distributing, storing and accessing products of the mind and at communication rather than processing alone (Owen, 2007). Hence there is a clear shift in the utilisation of Information and Communication Technologies (ICT), from simple processing of data to more complex process of communication and sharing of information across wider areas.

¹ 'India's Internet Economy can reach \$200 bn by 2020.' Financial Express, January 14, 2015.

<http://www.financialexpress.com/article/industry/tech/indias-internet-economy-can-reach-200-bn-by-2020/30039/>

Digitalisation is defined as conversion of analogue signals to digital form; for example converting a book or objects into digital resources through scanning or photograph. Libraries, museums, government departments etc. follow this basic process. Digitized information is easier to store, access and transmit and is also processed and transmitted by a number of consumer electronic devices.² Virtual integration of physically separated information, easy transmission and communication of data is the unique strength of digitalization. Information and Communication Technology (ICT) plays an important role in digitalisation process and consequently is developing as a strong enabler of sustainable socio-economic growth (Kuyoro, Awodele and Okolie, 2012).

In the last couple of decades, a rich body of literature has been built on the link between e-governance and social development. ICTs are seen as tools for ensuring efficiency and accountability. The generic term e-governance now has to be seen as “the digital route to good governance” (Heeks, 2001). The use of new technologies enables removal of discretionary power from street-level bureaucrats (Bovens & Zouridis, 2002), resulting in higher transparency of administrative processes (Elbahnasawy, 2014). These considerations have been widely accepted in India, where the National E-Governance Plan provides directives to improve governance through ICTs. Recently, new technologies have been adopted by the central government as well as many state governments in order to improve social welfare schemes. One such scheme is the revolutionary transformation of Public Distribution System to electronic Public Distribution System (ePDS) for effective delivery of ration to intended beneficiaries. It is revolutionary in the sense that with the help of technology, information about a key government system like PDS is made available to the masses and government officials alike making transparency and monitoring of the magnitude hitherto unimaginable, possible. Launched in 2012, the portal provides information on state wise commodity rates, allocation policies, allocation and off-take details, storage capacity data, ration card details and latest updates and news related to PDS. Technology today has made possible a unified system to streamline a system as vast and complex as PDS which since its launch in 1943 has been plagued with several inefficiencies like leakage of food grains, bogus ration cards, corruption, manual recording, and weak grievance redressed systems.

As is evident from many other such e-governance initiatives, it is pretty clear by now that ICT helps the Government to become more efficient and effective in delivering services and become much more transparent and accountable to the public. The perspective of the study can be located under the agenda of New Public Management (NPM). NPM advocates the implementation of modern principles of the private sector in the public sector.

According to Blau and Abramovitz, there are five factors that trigger social change: the economy, politics and structure of the government, ideology, history and social movements (Blau and Abramovitz, 2003). Technological innovations and changes brought by the ICT tools can trigger social change in the society by having a profound effect on the factors mentioned above. Various roadblocks in the implementation of social welfare programmes like middle men’s exploitation, corruption, interference of local politicians and bureaucracy are being smoothly evened out with the advent of ICT.

Though various ICT policies address the issues of effectiveness and efficiency of service delivery, there are certain questions regarding the link between ICT and social development still persists. The type of beneficiaries and their social and economic profile are crucial in success of programmes like Digital India. Ambedkar’s critical analysis of Indian social order is still relevant today. It is necessary to examine whether such critical analysis are taken into consideration while designing public policies like Digital India.

DIGITAL INDIA AND CHALLENGES

‘Digital India’ programme launched by Government of India offers a new platform to provide integrated public services at doorstep through mobile and internet technology. This ambitious project envisions transforming India into a digitally empowered society and a knowledge economy. Information and

² <https://www.techopedia.com/definition/6846/digitization>

Communications Technology (ICT) for enhanced accountability, transparency and inclusiveness as a part of 'Digital India' is projected as a viable alternative to the traditional system of governance. However, with the issues of 'Digital Divide' and 'e-illiteracy' still persisting, the challenges for equitable development are also prominent.

DIGITAL DIVIDE

OECD (2001) has defined 'Digital divide' as the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access Information and Communication Technologies (ICT) and to their use of the internet for a wide variety of activities³. 'Digital divide' refers to the gap between those that have (or lack) access to computers and the internet.⁴ According to Bansode and Patil (2011) factors like gender, physical disability, physical access, lack of ICT skills and support, attitudinal problems, age, racial segregation and relevant content will contribute for the overall digital divide in the world. In the Indian scenario, factors like low literacy rate, educational system and language problem play major role in creating the gap (Bansode and Patil, 2011). According to World Economic Forum's Network Readiness Index (NRI), India ranks 89th out of 143 countries⁵. NRI measures the propensity for the countries to exploit the opportunities offered by information and communications technology (ICT). Hence, India has a long way to go in bridging the digital divide in order to realise the full potential of e-governance initiatives.

Another important challenge for Digital India is the variations in the states as regards to Scheduled Caste (SCs) and Scheduled Tribes (STs) population and modes of communication. The tables below explain about the states with SC and ST population and modes of communications. States with substantial STs and SCs population like Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha and Rajasthan are comparatively behind the national average with respective to internet and mobile connectivity.

Table 1:- State wise S.C. /S.T. Population and Modes of Communication in Percentage

States	SCs %	STs %	SC+ ST %	Mode of Communication							
				Computer/Laptop			Telephone/Mobile phone				
				Total	With Internet	Without Internet	Total	Landline only	Mobile only	Both	
Andhra Pradesh	16.4	7.0	23.4	8.4	2.6	5.8	63.1	4.1	54.9	4.1	
Arunachal Pradesh	0.0	68.8	68.8	8.2	2.0	6.2	48.3	2.9	39.8	5.6	
Assam	7.2	12.4	19.6	9.4	1.6	7.8	47.9	2.2	43.5	2.3	
Bihar	15.9	1.3	17.2	7.1	0.9	6.2	55.5	2.3	51.6	1.7	
Chhattisgarh	12.8	30.6	43.4	4.6	1.2	3.4	30.7	1.5	27.2	2.0	
Delhi	16.8	0.0	16.8	29.1	17.6	11.5	90.8	5.1	68.3	17.4	
Goa	1.7	10.2	12.0	31.1	12.7	18.4	89.1	12.1	53.8	23.3	
Gujarat	6.7	14.8	21.5	8.8	3.1	5.7	69.0	3.3	58.6	7.1	
Haryana	20.2	0.0	20.2	13.3	5.3	8.0	79.3	4.5	66.9	8.0	
Himachal Pradesh	25.2	5.7	30.9	8.4	2.8	5.6	82.3	7.4	61.5	13.4	
Jammu & Kashmir	7.4	11.9	19.3	8.4	2.9	5.5	69.5	3.6	59.3	6.6	
Jharkhand	12.1	26.2	38.3	6.9	1.5	5.4	48.0	2.0	44.1	1.9	
Karnataka	17.1	7.0	24.1	12.8	4.8	8.0	71.6	7.0	56.5	8.1	
Kerala	9.1	1.5	10.6	15.8	6.3	9.5	89.7	11.6	46.8	31.3	
Madhya Pradesh	15.6	21.1	36.7	5.9	1.4	4.5	46.0	2.4	40.6	3.0	
Maharashtra	11.8	9.4	21.2	13.3	5.8	7.5	69.1	6.3	53.7	9.1	
Manipur	3.8	35.1	38.9	9.1	2.2	6.9	57.5	3.0	52.3	2.2	
Meghalaya	0.6	86.1	86.7	7.6	1.5	6.1	43.0	1.5	39.1	2.4	
Mizoram	0.1	94.4	94.5	15.2	2.5	12.7	72.7	1.7	63.9	7.2	
Nagaland	0.0	86.5	86.5	8.9	1.7	7.2	53.1	1.3	48.6	3.2	

3 See OECD report on 'Understanding Digital Divide' (2011) <http://www.oecd.org/sti/1888451.pdf>

4 The term "digital divide" is said to have been coined a decade ago by a former United States Assistant secretary for commerce for telecommunications and communication, Larry Irving, Jr, to focus attention on the existing gap in access to information services between those who can afford to purchase the computer hardware and software necessary to participate in the global information network, and low income families and communication that cannot

5 See <http://reports.weforum.org/global-information-technology-report-2015/network-readiness-index/#indexId=NRI>

Odisha	17.1	22.8	40.0	5.1	1.4	3.7	39.8	1.8	35.6	2.4
Punjab	31.9	0.0	31.9	12.8	5.4	7.4	82.1	6.7	62.3	13.2
Rajasthan	17.8	13.5	31.3	6.9	1.8	5.1	70.6	2.5	62.5	5.6
Sikkim	4.6	33.8	38.4	11.5	3.3	8.2	73.0	1.8	67.7	3.6
Tamil Nadu	20.0	1.1	21.1	10.6	4.2	6.4	74.9	5.7	62.1	7.1
Tripura	17.8	31.8	49.6	7.3	1.0	6.3	48.1	2.1	42.7	3.3
Uttar Pradesh	20.7	0.6	21.3	8.1	1.9	6.2	66.9	3.3	61.2	2.4
Uttarakhand	18.8	2.9	21.7	11.0	3.2	7.8	74.6	3.2	64.8	6.6
West Bengal	23.5	5.8	29.3	8.3	2.2	6.1	49.2	2.3	42.9	4.0
All-India	16.6	8.6	25.2	9.5	3.1	6.4	63.2	4.0	53.2	6.0

Source: - Census 2011

Table 2:- Analysis of Census Data

Modes of Communication	States SC/ST Population above National Average SC/ST Population (15 States)				States SC/ST Population above National Average SC/ST Population (14 States)			
	Below Average	National	Above Average	National	Below Average	National	Above Average	National
Total Number of Computers	12		3		6		8	
Internet	13		2		5		9	
Total Phones	9		6		3		11	
Mobile Phones	10		5		2		12	

Source: - Census 2011

Majority of states with SC/ST population above national average SC/ST Population are lagging behind the national average with regards to total number of computer, internet users, total phones and mobile phones. Whereas states with SC/ST population below national average SC/ST population are comparatively ahead of different modes of communication in relation to national average. Government of India should refocus its digital connectivity approach strategy in states having high SC/ST population and design Digital India policy in such a way that there is enhanced internet facility and infrastructure for better connectivity and reach.

Poverty normally is measured by economic divide, intake of number of calories and as per human development indicators. Developed countries showcased their hegemony through their economic and technological prowess. In future, the digital divide may become an important component of Human Development Index (HDI) and in measuring poverty. Hence, countries like India cannot afford to be in back seat with huge digitally illiterate population.

REENGINEERING SOCIAL WELFARE SCHEMES THROUGH DIGITAL INDIA

Under 'Digital India' programme there are nine pillars for a digital society i.e. Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-governance – reforming Government through technology, e-Kranti, Information for all, Electronic Manufacturing, IT for jobs and early Harvest Programmes that are being simplified from the 31 Mission Mode Projects (MMP)⁶. Providing broadband and mobile connectivity for villages, Common Service Centres (CSCs) and Post Offices are presently being utilized as multi-service centres for delivery of Government and business service delivery.⁷ Electronic delivery of various services through e-education, e-healthcare, e-banking, e-courts, e-police, financial inclusion and technology for the farmers, providing online data platform are some of the subcomponents of Digital India.

6 For more information on MMPs visit:

https://negp.gov.in/index.php?option=com_content&view=article&id=91&Itemid=654

7 <http://www.digitalindia.gov.in/content/public-internet-access-programme>

Various social welfare schemes introduced by the present government⁸ can be transformed through Digital India by providing connectivity to the interiors of the country. Broadband services to villages and towns for greater connectivity, which is also a crucial pillar of Digital India, need to be implemented properly. It will help in tracking marginalised sections in order to target them efficiently and effectively. States with higher SC/ST populations should be given importance in providing I.T. infrastructure facility. Virtual identification of beneficiaries for social welfare schemes like Public Distribution System (PDS) is important and it should not create problem in accessing services. Providing financial services to down trodden is a key for financial inclusion project. e-Kranti under the Digital India project helps for providing viable solution for such challenge. Universal access to mobile connectivity will enhance proper service delivery through mobile phone i.e. mobile governance. Giving special training on Information and Technology skills to rural youth and tracking the career advancement of rural youth through monitoring mechanism are also crucial. The scheme by using following strategies:

Government of India launched the Digital Saksharta Abhiyan (DISHA) or National Digital Literacy Mission (NDLM) to fill the digital gap in the country. The main objective of the programme is to impart information technology skill set to the individuals and communities. There must be certain incentives for the learners of the programmes while creating a proper communication channel to spread awareness about such programmes.

Public Private Partnership (PPP) is one of the viable options. PPP brings the new next generation technologies into the system and helps in infrastructure related issues. It will fill the gap in providing IT infrastructure to a geographically diverse country like us. PPP models will also bring finance. Various welfare schemes can be benefited with the help of such models.

Various social welfare schemes can leverage and harness the technological advancements in IT through cloud computing. Cloud services meets the requirements of government in many areas like centralized data management, easier consumption, anytime and anywhere data availability etc., Many of the public data can be put into 'public cloud'. Information like land records, government procurement details like tenders, auctions can be made cloud enabled. Any simple data like RTI compliant can be put into cloud. This enables most of the government processes being transparent and it is a win-win situation for both citizens and governments. Governments can save the high cost involved in setting up 'On Premise' software and its maintenance by opting for cloud computing. The sensitive and secured information can be kept in 'Private cloud' where the data would be secured through encryption.

RELEVANCE OF THE STUDY

'Digital India' programme launched by Government of India offers a new platform to provide integrated public services at doorstep through mobile and internet technology. This ambitious project envisions transforming India into a digitally empowered society and a knowledge economy. Information and Communications Technology (ICT) for enhanced accountability, transparency and inclusiveness as a part of 'Digital India' is projected as a viable alternative to the traditional system of governance. However, with the issues of 'Digital Divide' and 'e-illiteracy' still persisting, and their impact on the socially backward communities is comparatively high. Hence, the present study will help in critically evaluate the implementation of the programme.

⁸ Various Social Welfare Schemes includes Pradhan Mantri Jan Dhan Yojana, Deen Dayal Upadhyaya Grameen Kaushalya Yojana, Digital life certificate 'Jeevan Pramaan' for pensioners, Deen Dayal Upadhyaya Antyodaya Yojana for urban and rural poor, Pandit Deendayal Upadhyay Shramev Jayate Karyakram, 'Make in India' global initiative, Swachh Bharat Abhiyan (Clean India Campaign), Deendayal Upadhyaya Gram Jyoti Yojana, Sukanya Samridhi account, Beti Bachao, Beti Padhao Yojana, Deendayal Upadhyaya Gram Jyoti Yojana, Sukanya Samridhi account, HRIDAY (National Heritage City Development and Augmentation Yojana) scheme

RESEARCH OBJECTIVES

- To critically understand the implementation of Digital India programme
- To understand the impact of caste on the digitalisation process
- To critically evaluate the impact of digitalisation process on the marginalised sections of the society

This is the pilot study of above objectives

Tabl-1: Gender wise Aware of Digital India Programme

Sex	Aware	Not Aware	Total
Female	6 (60.00)	4 (40.00)	10 (28.57)
Male	22 (88.00)	3 (12.00)	25 (71.43)
Total	28 (80.00)	7 (20.00)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

Tabl-2: Gender wise Comfortability of Accessing the Scheme

Sex	1	2	3	4	Total
Female	5 (50.00)	-	5 (50.00)	-	10 (28.57)
Male	18 (72.00)	6 (24.00)	-	1 (4.00)	25 (71.43)
Total	23 (65.70)	6 (17.14)	5 (14.28)	1 (2.85)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

Tabl-3: Gender wise Opinion about Digital Initiatives Policy Implementation

Sex	1	2	3	4	Total
Female	6 (60.00)	4 (40.00)	-	-	10 (28.57)
Male	19 (76.00)	4 (16.00)	1 (4.00)	1 (4.00)	25 (71.43)
Total	25 (71.40)	8 (22.85)	1 (2.85)	1 (2.85)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

Tabl-4: Age wise Aware of Digital India Programme

Age	Aware	Not Aware	Total
20 to 25	17 (100)	-	17 (48.57)
26 to 35	5 (71.40)	2 (28.60)	7 (20.20)
36 to 45	3 (42.90)	4 (57.10)	7 (20.20)
46 to 60	3 (75.00)	1 (25.00)	4 (11.42)
Total	28 (80.00)	7 (20.00)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

Tabl-5: Age wise Comfortability of Accessing the Scheme

Age	1	2	3	4	Total
20 to 25	15 (88.20)	2 (11.80)	-	-	17 (48.57)
26 to 35	4 (57.10)	2 (28.60)	1 (14.30)	-	7 (20.20)
36 to 45	1 (14.30)	2 (28.60)	4 (57.10)	-	7 (20.20)
46 to 60	3 (75.00)	-	-	1 (25.00)	4 (11.42)
Total	23 (65.71)	6 (17.14)	5 (14.28)	1 (2.85)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

Table-6: Age wise Opinion about Digital Initiatives Policy Implementation

Age	1	2	3	4	Total
20 to 25	13 (76.47)	3 (17.64)	-	1 (5.88)	17 (48.57)
26 to 35	4 (57.10)	2 (28.60)	1 (14.30)	-	7 (20.20)
36 to 45	5 (71.40)	2 (28.60)	-	-	7 (20.20)
46 to 60	3 (75.00)	1 (25.00)	-	-	4 (11.42)
Total	25 (71.40)	8 (22.90)	1 (2.90)	1 (2.90)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

Tabl-7: Educational Qualification wise Aware of Digital India Programme

Level of Education	Aware	Not Aware	Total
Below Secondary	6 (85.71)	1 (14.29)	7 (20.00)
Secondary	3 (75.00)	1 (25.00)	4 (11.42)
Diploma	1 (100)	-	1 (2.86)
Graduate	4 (100)	-	4 (11.43)
Post Graduate	1 (100)	-	1 (2.86)
M.Phil.	3 (100)	-	3 (8.57)
Ph.D.	5 (83.33)	1 (16.67)	6 (17.14)
Engineering	2 (100)	-	3 (8.57)
M.BA.	1 (100)	-	1 (2.86)
Illiterate	1 (20.00)	4 (80.00)	5 (14.29)
Total	28 (80.00)	7 (20.00)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

Tabl-8: Educational Qualification wise Comfortability of Accessing the Scheme

Level of Education	1	2	3	4	Total
Below Secondary	3 (42.86)	2 (28.57)	2 (28.57)	-	7 (20.00)
Secondary	4 (100)	-	-	-	4 (11.42)
Diploma	1 (100)	-	-	-	1 (2.86)
Graduate	4 (100)	-	-	-	4 (11.43)
Post Graduate	1 (100)	-	-	-	1 (2.86)
M.Phil.	3 (100)	-	-	-	3 (8.57)
Ph.D.	4 (66.67)	2 (33.23)	-	-	6 (17.14)
Engineering	3 (100)	-	-	-	3 (8.57)

M.BA.	-	1 (100)	-	-	1 (2.86)
Illiterate	-	1 (20.00)	3 (60.00)	1 (20.00)	5 (14.29)
Total	23 (65.71)	6 (17.14)	5 (14.29)	1 (2.86)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

Tabl-9: Educational Qualification wise Opinion about DigitalInitiatives Policy Implementation

Level of Education	1	2	3	4	Total
Below Secondary	4 (57.14)	3 (42.86)	-	-	7 (20.00)
Secondary	3 (75.00)	1 (25.00)	-	-	4 (11.42)
Diploma	1 (100)	-	-	-	1 (2.86)
Graduate	1 (25.00)	2 (50.00)	1 (25.00)	-	4 (11.43)
Post Graduate	-	-	-	1 (100)	1 (2.86)
M.Phil.	3 (100)	-	-	-	3 (8.57)
Ph.D.	3 (50.00)	2 (33.33)	1 (16.67)	-	6 (17.14)
Engineering	3 (100)	-	-	-	3 (8.57)
M.BA.	1 (100)	-	-	-	1 (2.86)
Illiterate	4 (80.00)	1 (20.00)	-	-	5 (14.29)
Total	23 (65.71)	9 (25.71)	2 (5.71)	1 (2.86)	35 (100)

Source: Field Study Note: Figures in brackets are Percentages

METHODOLOGY

The methodology to be used for this research will be descriptive and analytical. It would be a mixed methodology – both quantitative and qualitative analysis in terms of empirical, and statistical data and analysis of field level data of the related to the schemes. The data for the research will be collected from the primary and secondary sources. The primary sources would include individual interviews and focus group discussions at village level to understand the aspirations of the people. The Secondary data includes books, articles, census 2011 data and policy documents.

CONCLUSION

Digital India with its strength of one billion plus population will be the biggest experiment of its kind, world-wide. If it is implemented in the right manner, the initiative will be a novel model for other developing and under developed nations and contribute greatly towards the collective progress of human race. Making

infrastructure available for quick implementation of technology systems to support the projects, make beneficiaries aware of the ease in service delivery and how they can make the best of it and automate processes for better monitoring and transparent e-governance practices are essential to ensure the worthy realisation of the objectives and mission of the acclaimed Digital India programme.

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